IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF MAILING

I hereby certify that this **Preliminary Amendment** and the documents referred to as enclosed therein are being deposited with the United States Postal Service on the date indicated below the sufficient postage as First Class Mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

Donald G. Lewis

Oct 30, 2001
Date of Deposit

Applicant:	Boger	Art Unit: 1626
Serial No.:	unassigned	
Filed:	October 30, 2001	Examiner: Unassigned
For:	SYNTHESIS OF CC-1065/ DUOCARMYCIN ANALOGS	Our Ref.: TSRI 626.1 Div I

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Filed herewith is a divisional application claiming priority from SN 09/581,049. Prior to examination of the enclosed divisional application, please amend the specification and claims as follows:

AMENDMENTS

In the Specification:

At page 1, line 1 of the specification, please insert the following new sentence:

Statement of Government Support:

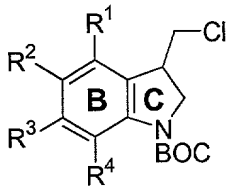
This invention was made with government support under Contract No. CA55276 by the National Institutes of Health. The government has certain rights in the invention.

In the Claims:

Please cancel claims 2-18 without prejudice.

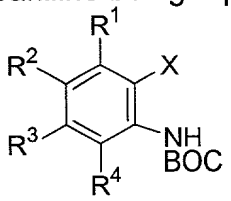
Please amend Claim 1 and add new claims 19-31 as follows:

1. (once amended) A process for synthesizing a dihydroindole C-ring of a CC-1065/duocarmycin analog, the dihydroindole C-ring of a CC-1065/duocarmycin analog being represented by the following structure:



the process comprising the following steps:

Step A: allylating an *ortho*-haloaniline with 1,3-dichloropropene for forming a vinyl chloride, the *ortho*-haloaniline being represented by the following structure:



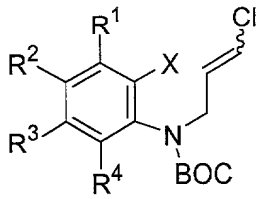
;

wherein:

R^1, R^2, R^3, and R^4 are radicals independently selected from the group consisting of hydrogen, alkyl(C1-C6), alkoxy, and arylalkoxy, with a proviso that R^1 and R^2, or R^2 and R^3 may form a fused 5- or 6-membered ring with or without a heteroatom; and

X is a halide selected from the group consisting of bromine and iodine; and

the vinyl chloride is represented by the following structure:



; then

Step B: cyclizing the vinyl chloride of said step A for forming the dihydroindole C-ring of the CC-1065 / duocarmycin analog.

19. (new claim) A process according to claim 1 wherein, in said Step A, the *ortho*-haloaniline is an *ortho*-bromoaniline.

20. (new claim) A process according to claim 1 wherein, in said Step A, the *ortho*-haloaniline is an *ortho*-iodoaniline.

21. (new claim) A process according to claim 1 wherein, in said Step A, the *ortho*-haloaniline is protected with a BOC group.

22. (new claim) A process according to claim 1 wherein, in said Step A, said allylation is catalyzed by the addition of a catalytic amount of tetra-*n*-butyl ammonium iodide.

23. (new claim) A process according to claim 1 wherein, in said Step B, said cyclization is performed with an addition of tri-*n*-butyltin hydride.

24. (new claim) A process according to claim 23 wherein, in said Step B, said cyclization is catalyzed by the addition of a catalytic amount of AIBN.

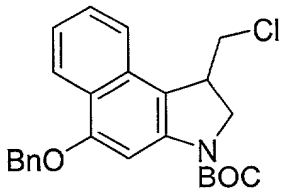
25. (new claim) A process according to claim 24 wherein, in said Step B, said cyclization is performed using toluene as the solvent.

26. (new claim) A process according to claim 1 wherein:

in said Step A, the vinyl chloride is represented by the following structure:

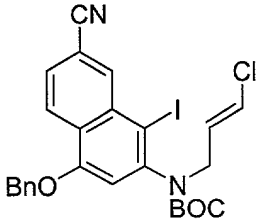
and

in said Step B, the dihydroindole C-ring of the CC-1065 / duocarmycin analog is represented by the following structure:



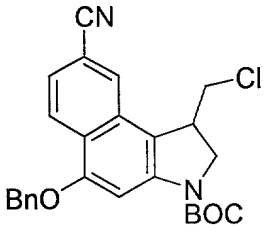
27. (new claim) A process according to claim 1 wherein:

in said Step A, the vinyl chloride is represented by the following structure:



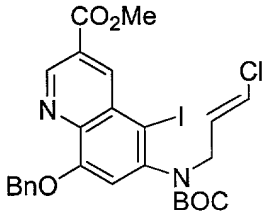
and

in said Step B, the dihydroindole C-ring of the CC-1065 / duocarmycin analog is represented by the following structure:



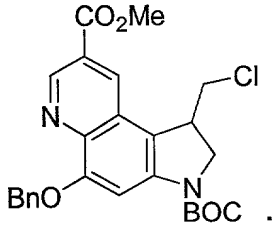
28. (new claim) A process according to claim 1 wherein:

in said Step A, the vinyl chloride is represented by the following structure:



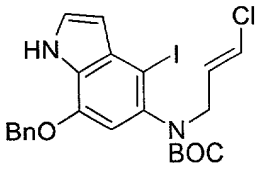
and

in said Step B, the dihydroindole C-ring of the CC-1065 / duocarmycin analog is represented by the following structure:



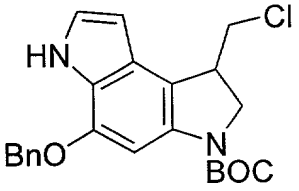
29. (new claim) A process according to claim 1 wherein:

in said Step A, the vinyl chloride is represented by the following structure:



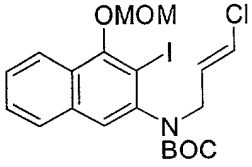
and

in said Step B, the dihydroindole C-ring of the CC-1065 / duocarmycin analog is represented by the following structure:



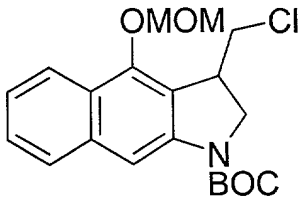
30. (new claim) A process according to claim 1 wherein:

in said Step A, the vinyl chloride is represented by the following structure:



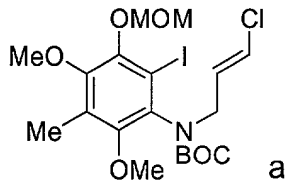
and

in said Step B, the dihydroindole C-ring of the CC-1065 / duocarmycin analog is represented by the following structure:



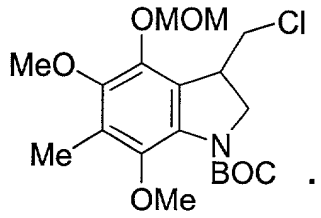
31. (new claim) A process according to claim 1 wherein:

in said Step A, the vinyl chloride is represented by the following structure:



and

in said Step B, the dihydroindole C-ring of the CC-1065 / duocarmycin analog is represented by the following structure:



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Respectfully submitted,

Oct 30, 2001

Date

Donald G. Lewis, Reg. No. 28,636

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APPENDIX

VERSION OF SPECIFICATION AND CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

At page 1, line 1 of the specification, please insert the following new sentence:

Statement of Government Support:

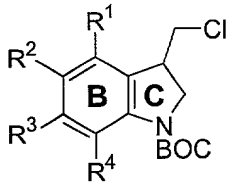
This invention was made with government support under Contract No. CA55276 by the National Institutes of Health. The government has certain rights in the invention.

In the Claims:

Please cancel claims 2-18 without prejudice.

Please amend Claim 1 and add new claims 19-31 as follows:

1. (once amended) A [method] process for [the synthesis] synthesizing a dihydroindole C-ring of a CC-1065/duocarmycin analog, the dihydroindole C-ring of a CC-1065/duocarmycin analog being represented by the following structure:



[wherein the method comprises] the process comprising the following steps [of]:

Step A: allylating an [aryl halide] *ortho*-haloaniline with 1,3-dichloropropene [and a catalytic amount of *n*-tetrabutylammonium iodide] for forming a vinyl chloride, the *ortho*-haloaniline being represented by the following structure:

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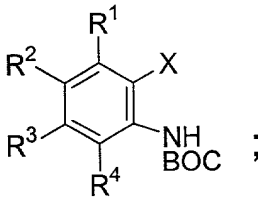
VERSION OF SPECIFICATION AND CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

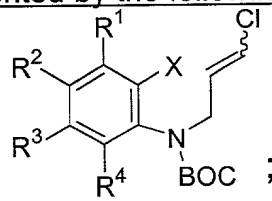


;

wherein:

R^1, R^2, R^3, and R^4 are radicals independently selected from the group consisting of hydrogen, alkyl(C1-C6), alkoxy, and arylalkoxy, with a proviso that R^1 and R^2, or R^2 and R^3 may form a fused 5- or 6-membered ring with or without a heteroatom; and

X is a halide selected from the group consisting of bromine and iodine; and the vinyl chloride is represented by the following structure:



; then

Step B: cyclizing the vinyl chloride of said step A [under conditions using tributyl tin hydride, catalytic AIBN and toluene as the solvent] for forming the dihydroindole C-ring of the CC-1065 / duocarmycin analog.

19. (new claim) A process according to claim 1 wherein, in said Step A, the *ortho*-haloaniline is an *ortho*-bromoaniline.

20. (new claim) A process according to claim 1 wherein, in said Step A, the *ortho*-haloaniline is an *ortho*-iodoaniline.

21. (new claim) A process according to claim 1 wherein, in said Step A, the *ortho*-haloaniline is protected with a BOC group.

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VERSION OF SPECIFICATION AND CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

22. (new claim) A process according to claim 1 wherein, in said Step A, said allylation is catalyzed by the addition of a catalytic amount of tetra-*n*-butyl ammonium iodide.

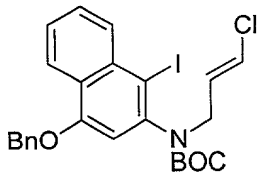
23. (new claim) A process according to claim 1 wherein, in said Step B, said cyclization is performed with an addition of tri-*n*-butyltin hydride.

24. (new claim) A process according to claim 23 wherein, in said Step B, said cyclization is catalyzed by the addition of a catalytic amount of AIBN.

25. (new claim) A process according to claim 24 wherein, in said Step B, said cyclization is performed using toluene as the solvent.

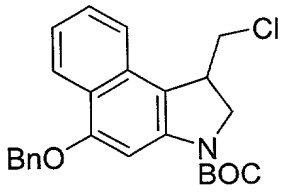
26. (new claim) A process according to claim 1 wherein:

in said Step A, the vinyl chloride is represented by the following structure:



and

in said Step B, the dihydroindole C-ring of the CC-1065 / duocarmycin analog is represented by the following structure:



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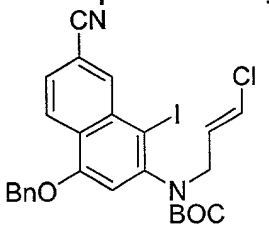
VERSION OF SPECIFICATION AND CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

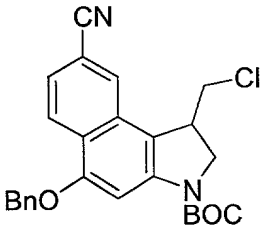
27. (new claim) A process according to claim 1 wherein:

in said Step A, the vinyl chloride is represented by the following structure:



and

in said Step B, the dihydroindole C-ring of the CC-1065 / duocarmycin analog is represented by the following structure:



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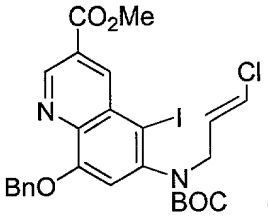
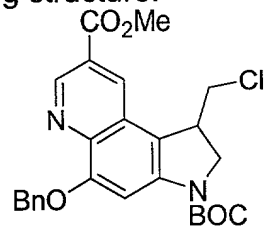
28. (new claim) A process according to claim 1 wherein:

in said Step A, the vinyl chloride is represented by the following structure:



and

in said Step B, the dihydroindole C-ring of the CC-1065 / duocarmycin analog is represented by the following structure:



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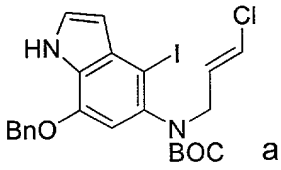
VERSION OF SPECIFICATION AND CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

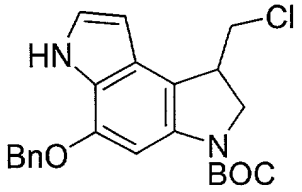
29. (new claim) A process according to claim 1 wherein:

in said Step A, the vinyl chloride is represented by the following structure:



and

in said Step B, the dihydroindole C-ring of the CC-1065 / duocarmycin analog is represented by the following structure:



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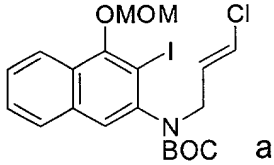
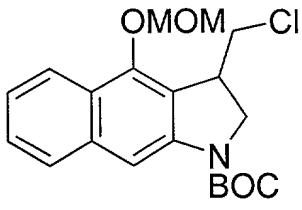
30. (new claim) A process according to claim 1 wherein:

in said Step A, the vinyl chloride is represented by the following structure:



and

in said Step B, the dihydroindole C-ring of the CC-1065 / duocarmycin analog is represented by the following structure:



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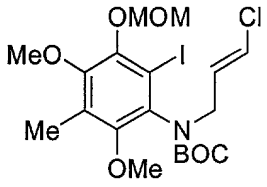
VERSION OF SPECIFICATION AND CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

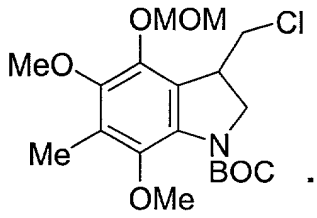
31. (new claim) A process according to claim 1 wherein:

in said Step A, the vinyl chloride is represented by the following structure:



and

in said Step B, the dihydroindole C-ring of the CC-1065 / duocarmycin analog is represented by the following structure:



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